



China: Solid Waste Treatment in Liaoning

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Summary

Liaoning province, China's important industrial and raw material base, lies in the south of the country's northeast region. With 14 municipalities and a population of 42 million, the province covers an area of over 150,000 sq. km. The pillar industries in Liaoning include petrochemical, metallurgy, electronics/information technology, and manufacturing. The outputs of these industries are also unavoidably accompanied by a high-volume production of industrial solid and hazardous wastes. The National Hazardous Waste Catalogue has identified 47 types of hazardous waste items, and 39 of those exist in large quantity in Liaoning. In Liaoning, the accumulated hazardous waste has added up to 7.87 million tons, ranked No. 1 in China. According to 2005 statistics, the industrial solid waste in Liaoning was 88.79 million tons in that year, including 840,000 ton of hazardous waste, among which, 91% came from 15 types of major hazardous waste, such as waste acid, waste alkali, arsenic-containing solid waste, waste mineral oils, rectification residue, waste emulsion, chromium waste and medical waste, each with an annual volume of over 10,000 tons.

Market Demand and Data

The increasing importance of environmental protection has made solid waste treatment, especially the hazardous waste treatment, one of the priorities in Liaoning. To date, cities in Liaoning with medical treatment centers include Shenyang, Dalian, Anshan, Dandong and Fuxin. A waste disposal center will be built in the juncture of Shenyang, Fushun and Tieling to serve Fushun and Tieling with hazardous waste treatment. In Liaoning, the main method for hazardous waste treatment is incineration, and for domestic waste is landfill. However, since incineration will produce other hazardous substances, local governments have been very cautiously approving each incineration project.

Responding to China's "Energy Efficiency and Emission Reduction" plan, the recycle and reutilization of domestic waste has been marked as a priority for the "circular economy" development agenda. In addition, the risks of underground water being polluted by landfill waste and the potential of radioactive pollution from previously collected electronic waste have both been brought to the attention of the government and industries.

Key Player/ Potential Competitors

The Liaoning Hazardous Waste Management Center (under the Liaoning Environmental Protection Bureau) oversees the province's solid waste treatment projects, and issues hazardous waste management operating licenses to local private companies. Private companies are the key players in the market. Shenyang Hanyang Environmental Protection Enterprise Co., Ltd, a joint venture between Shenyang Solid Waste Treatment Center and Shenzhen Hanyang Investment Holding Co., Ltd., is engaged in medical waste disposal in Shenyang. Hanyang invested 360 million RMB to build a medical waste incineration center in Hushitai, Shenyang, with a capacity to handle 30 tons of waste a day. Dalian Dongtai Industrial Waste Treatment Co., Ltd. is a major player in Dalian for collecting, disposing and recycling industrial waste. The U.S company UE IEMvirotech has been working with Anshan, Dandong and Fuxin through a BOT agreement to treat the medical waste in these cities.

Regulatory Environment

In accordance with the State Council's Regulations on the Administration of Medical Waste, in 2005 Liaoning province issued and published Document No. 134 on Liaoning Medical Waste Administration Implementation.

The Regulation specified the obligations of medical waste treatment, supervision and punishment. The details of the regulation can be located at Liaoning government's website at http://www.ln.gov.cn/communique/govfiles/govorder/36_28441.htm.

Best Prospects

Liaoning has 10 million tons of waste boron mud, and according to the Liaoning Hazardous Waste Management Center, the distillation technologies for waste boron in China is far behind that of the the U.S. The distillation rate in the U.S. can reach 70% to 80%, but it is only 20% to 30% in China. Liaoning would like to work with U.S. companies in dealing with waste boron mud in Kuandian (under the Dandong Municipality) and Yingkou areas.

Under its five-year work plan, the Province has started to build an emergency laboratory for the identification and fielding monitoring of hazardous waste. Some emergency-testing equipment such as gas analyzer have been purchased. U.S. equipment and service providers of laboratory instruments and field monitoring systems may find potential opportunities in this laboratory construction project.

One priority for Liaoning is to build a hazardous waste management system. The system will provide a platform for information integration, and realize remote reporting, license application, hazardous waste transfer management, risk analysis and GPS monitoring among the fourteen municipalities. CS Shenyang would like to refer U.S. companies of such specialization to Liaoning.

In addition to the above, although Liaoning is China's manufacturing base, including for producing environmental protection machinery, the technical level for these machinery is still at a rather lower level. U.S. equipment and service of high-end technology, such as landfill leachate and gas collection, waste-to-energy, etc, should have prospect in Liaoning. Commercial Service advises U.S. exporters to work with their lawyers to protect their patents and trademarks before entering the China market.

Competition and Conclusions

Liaoning has high regard for U.S. technology, especially as it is applied to the medical and hazardous waste management, and information technology for hazardous waste management. Japanese and German technology for electro-waste treatment is competitive in this market. Foreign firms from Japan, South Korea, Germany, Canada and European Union are also active in Liaoning.

Some companies have entered the market through BOT projects, and some through technology transfer or joint ventures. U.S. players may find an advantage in Liaoning by bringing in high-end technologies and remaining competitive on pricing.

Trade Events

2008 China International Environmental Protection Fair
Date: June 26-28, 2008
Venue: Dalian Star-sea Convention& Exhibition Center
Tel: 411-82538643
Fax: 411-82538616

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